

**REMARKS/ARGUMENTS**

Favorable reconsideration and allowance of the present patent application are respectfully requested in view of the foregoing amendments and the following remarks. Claims 1-3, 5-6, 8-9, 12-15 and 18-38 are pending in the application. Claims 1, 12, 22, 25 and 29 are independent claims. Claims 34-38 are added by this Amendment.

*Allowable Subject Matter*

Applicant notes with appreciation the indication on page 4 of the Office Action that claims 1-3, 5, 6, 8, 9 and 22-24 are allowed.

*35 U.S.C. §102(e) - Adams*

Claims 12-15, 18-21 and 25-33 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,594,366 ("Adams"). Applicant respectfully traverses this art grounds of rejection.

1. Discussion of Adams.

As discussed in great detail earlier in the prosecution of this case, Adams is directed to determining whether an output device connected to portable electronic device 50 is a headphone 101 capable of outputting stereo or two-channel sound via stereo speakers, or alternatively whether the connected output device is a headset 103 capable of outputting mono or one-channel sound via a speaker while also inputting one-channel sound via a microphone into the portable electronic device 50. The manner by which the portable electronic device 50 makes the headphone 101 or headset 103 determination is based on measured impedances (e.g., based on an applied DC voltage test signal) on two I/O channels to between the devices.

In Adams, it will be appreciated that if a headphone 101 is connected to the portable electronic device 50, then (i) the headphone 101 can receive stereo-quality audio from the portable electronic device 50 over two output-channels, and (ii) the headphone 101 cannot send audio of any type back to the portable electronic device 50. It will also be appreciated that if a headset 103 is connected to the portable electronic device 50, then (i) the headset 103 can receive mono-quality audio from the portable electronic device 50 over one channel, and (ii) the headset 103 can send mono-quality audio back to the portable electronic device 50 on another channel.

2. Distinctions of the claims over Adams.

Regarding the claim language of “determining a type of the received audio signals”, the Examiner’s position is as follows:

The type of audio signal is determined by the sensing circuit. If a headphone is detected, the type of signal is identified as stereo music. If a headset is detected, voice or mono music is identified.

*(e.g., see Pages 4-5 of the Office Action)*

Applicant disagrees with this interpretation of Adams. Firstly, the presence of a headphone or headset does not mean any audio signals are being exchanged. It is entirely possible that the headphone or headset could be detected by the sensing circuit, but then no audio signals are ever exchanged. Thus, the claim language of “received audio signals” is not necessarily present in Adams simply by virtue of the connection of a headset 103 or headphone 101 electronic device 50.

Secondly, as an example, the preamble of claim 12 defines the context of the “received audio signals” by reciting “processing received audio signals in a device”. Thus, the claimed “received audio signals” are from the perspective of the device, which means that the audio signals are received at the device, and not the audio output device.

Applicant has clarified this aspect by amending the claim language of “wherein the received audio signals are received at the device for output to the audio output device” into claim 12 and similarly into claims 25 and 29. Thus, for example, when claim 12 recites “determining a type of the received audio signals”, the type of the received audio signals corresponds to audio signals that are intended for output by the audio output device.

As noted above, the electronic device 50 in Adams does not send any audio signals to the phone, but rather only receives audio signals from the phone. Accordingly, a determination that a headphone 101 is connected to the phone cannot identify “received audio signals” as stereo-signals in Adams because the headphone 101 has absolutely no effect on what audio signals are received at the electronic device 50. As such, the Examiner’s statement that “[i]f a headphone is detected, the type of signal is identified as stereo music” appears incorrect, as the headphone’s connection has no bearing on the audio received at the electronic device 50 in Adams.

Alternatively, if a headset 103 is connected to the electronic device 50, the headset 103 would only be capable of sending single-channel voice audio back to the electronic device 50. However, even under this interpretation, the voice data from the single-input channel of the headset 103 is not “received at the device for output to the audio output device” as recited in independent claims 12, 25 and 29. It makes little sense to speak into a microphone-portion of the headset 103 only to have your own voice immediately routed back to a speaker-portion of the headset 103. Rather, in normal operation, one would expect the electronic device 50 to send the voice data from the user of the headset 103 to another phone participating in the communication session.

In view of the above remarks, Applicant respectfully submits that Adams cannot disclose or suggest “determining a type of the received audio signals; wherein the received audio signals

are received at the device for output to the audio output device” as recited in independent claim 12 and similarly recited in independent claims 25 and 29.

As such, claims 13-15, 18-21, 26-28 and 30-33, dependent upon independent claims 12, 25 and 39, respectively, are likewise allowable over Adams at least for the reasons given above with respect to the independent claims.

Applicant respectfully requests that the Office withdraw this art grounds of rejection.

*Allowance is further requested for newly added claims 34-38*

Claim 34 recites “wherein the type of the audio output device is capable of outputting a given type of audio signals, and wherein the type of the received audio signals is determined to be different than the given type of audio signals”. Under the Examiner’s interpretation of the claim language, the type of the “audio output device” (i.e., headphone 101 or headset 103) defines the determined type of the audio signals. Accordingly, it would not be possible for the type of the audio signals to be different than the type of audio signals supported by the headphone or headset under the Examiner’s own interpretation.

Claim 35 recites “wherein the receive audio processing path is not associated with audio signals received from the audio output device”. The Examiner appears to read the “receive audio processing path” being enabled or disabled on Adams at Col. 2, lines 60-65, which describes the AM/FM functionality being disabled and the microphone input being enabled when the headset 103 is connected. However, this ‘disabling’ does not affect the “receive audio processing path” at the electronic device 50, but rather the ‘transmit’ audio processing path from the electronic device 50 to the headset 103. Also, the microphone input being ‘re-enabled’ implies that the microphone input is disabled when the headphone 103 is not connected. However, the claim language of claim 35 specifies that the “wherein the receive audio processing path is not

associated with audio signals received from the audio output device”, and as such that claimed “receive audio processing path” would not read on path of voice data from the headset 103 to the electronic device 50.

Claim 36 recites “disabling the first channel in response to the control output by reducing power at one or more components within the device”. The Examiner has already admitted this aspect to be absent from Adams, and as such allowance for claim 36 is respectfully requested (E.g., see page 4 of the Office Action).

Claim 37 recites “wherein the type of the audio output device is determined to be stereo-capable, and wherein the control output is provided to disable the first channel in the receive audio processing path”. On Page 5 of the Office Action, the Examiner indicates that the disabling of the audio output device corresponds to the disabling of the AM/FM radio functionality when the headset 103 is connected. However, the headset 103 is only capable of outputting mono-audio, and not stereo-audio (e.g., through either its speaker or microphone). Thus, the AM/FM radio functionality would not be disabled when the headphone 101 is connected. As such, an indication of allowance for claim 37 is respectfully requested.

Claim 38 recites “wherein the type of the received audio signals is determined to be stereo”. Applicant already clarified in claim 12 that the “received audio signals are received at the device for output to the audio output device”. The only audio signals that can be received at the electronic device 50 appear to be from the headset 103 over a single channel, because the headphone 101 sends nothing back to the electronic device 50. Accordingly, the headset 101 can only send mono audio signals, and not stereo signals. As such, an indication of allowance for claim 38 is respectfully requested.

Reconsideration and allowance of the present application is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, at the telephone number listed below.

Deposit Account Authorization

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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